

**CENTER FOR DRUG EVALUATION AND  
RESEARCH**

***APPLICATION NUMBER:***

**75-147**

**ADMINISTRATIVE DOCUMENTS**

# ANDA APPROVAL SUMMARY

DA: 75-147 DRUG PRODUCT: Isosorbide Mononitrate

FIRM: Teva Pharmaceuticals DOSAGE FORM: Tablet

STRENGTH: 20 mg

CGMP STATEMENT/EIR UPDATE STATUS:

CGMP certification is satisfactory (See Page 2024).

EIR update : Acceptable on April 10, 1998.

BIO STUDY: Satisfactory.

Bioequivalence study of Isosorbide Mononitrate Tablet, 20 mg lot# K-20844 is found acceptable on 1-15-98. (see Bio. Review by M. Park on 8-15- 1997).

Bio. dissolution specification same as manufacturing:

Medium : 900 ml water, Apparatus II (paddle) at 50 rpm:

Specification:

VALIDATION - (DESCRIPTION OF DOSAGE FORM SAME AS FIRM'S):  
is pending.

STABILITY - ARE CONTAINERS USED IN STUDY IDENTICAL TO THOSE IN  
CONTAINER SECTION?:

Containers used in the stability testing are the same as described in the container section.

Proposed market container/closures:

Fill size	30 tablets	30 tablets	100 tablets	1000 tablets
Bottle manufacturer				
Bottle Size	30cc white,	30cc, white	30cc white,	300cc white,
Closure Manufacturer				
Closure Type	CRC	Metal Screw	CRC	Metal Screw
Closure Size	33 mm	33 mm	33 mm	53 mm

Pharmaceutical Coil Manufacturer				
Cotton Type				

LABELING:

Satisfactory per A. Vezza on 8-11-98.

STERILIZATION VALIDATION (IF APPLICABLE):

NA

SIZE OF BIO BATCH (FIRM'S SOURCE OF NDS OK?):

20 mg tablet Lot # K-20844;                      tablets

Firm's source of NDS OK : Yes

DMF

SIZE OF STABILITY BATCHES - (IF DIFFERENT FROM BIO BATCH, WERE THEY  
MANUFACTURED VIA THE SAME PROCESS?):

20 mg tablet Lot # K-20844,                      tablets

PROPOSED PRODUCTION BATCH - MANUFACTURING PROCESS THE SAME AS  
BIO/STABILITY?:

20 mg tablet:                      ablets

Manufacturing process is the same as bio. and stability batch.

Reviewer: S.Basaran

DATE:10-9-1998

*S. Basaran* 10/26/98

Team Leader: U.Venkataram

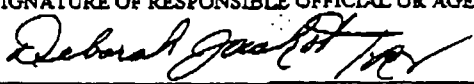
DATE:10-9-1998

*U.V. Venkataram*

10/26/98

F/T by pah/10/26

<b>DEPARTMENT OF HEALTH AND HUMAN SERVICES</b> <b>FOOD AND DRUG ADMINISTRATION</b> <b>APPLICATION TO MARKET A NEW DRUG, BIOLOGIC, OR AN</b> <b>ANTIBIOTIC DRUG FOR HUMAN USE</b> <i>(Title 21, Code of Federal Regulations, 314 &amp; 601)</i>		Form Approved: OMB No. 0910-0338 Expiration Date: April 30, 2000 See OMB Statement on last page.
		FOR FDA USE ONLY
		APPLICATION NUMBER
<b>APPLICATION INFORMATION</b>		
NAME OF APPLICANT <b>TEVA Pharmaceuticals USA</b>		DATE OF SUBMISSION <b>November 23, 1998</b>
TELEPHONE NO. (Include Area Code) <b>(215) 256-8400</b>		FACSIMILE (FAX) Number (include Area Code) <b>(215) 256-8105</b>
APPLICANT ADDRESS (Number, Street, City, State, Country, ZIP Code or Mail Code, and U.S. License Number if previously issued): <b>1510 Delp Drive</b> <b>Kulpsville, PA 19443</b>		AUTHORIZED U.S. AGENT NAME & ADDRESS (Number, Street, City, State, and ZIP Code telephone & FAX number) (IF APPLICABLE)
<b>PRODUCT DESCRIPTION</b>		
NEW DRUG OR ANTIBIOTIC APPLICATION NUMBER, OR BIOLOGICS LICENSE NUMBER (If previously issued) <b>75-147</b>		
ESTABLISHED NAME (e.g., Proper name, USP/USAN name) <b>ISOSORBIDE MONONITRATE TABLETS</b>		PROPRIETARY NAME (trade name) IF ANY
CHEMICAL/BIOCHEMICAL/BLOOD PRODUCT NAME (If any) <b>1,4:3,6-Dianhydro-D-glucitol-5-nitrate</b>		CODE NAME (If any)
DOSAGE FORM: <b>TABLETS</b>	STRENGTHS: <b>20 mg</b>	ROUTE OF ADMINISTRATION: <b>ORAL</b>
PROPOSED INDICATION(S) FOR USE: <b>Indicated for the prevention and treatment of angina pectoris due to coronary artery disease.</b>		
<b>APPLICATION INFORMATION</b>		
APPLICATION TYPE (check one) <input type="checkbox"/> NEW DRUG APPLICATION (21 CFR 314.50) <input checked="" type="checkbox"/> ABBREVIATED APPLICATION (ANDA, AADA, 21 CFR 314.94) <input type="checkbox"/> BIOLOGIC APPLICATION (21 CFR part 601)		
IF AN NDA, IDENTIFY THE APPROPRIATE TYPE <input type="checkbox"/> 501 (b) (1) <input type="checkbox"/> 505 (b) (2) <input type="checkbox"/> 507 IF AN ANDA, OR AADA, IDENTIFY THE REFERENCE LISTED DRUG PRODUCT THAT IS THE BASIS FOR THE SUBMISSION Name of Drug <b>MONOKET<sup>®</sup></b> Holder of Approved Application <b>SCHWARZ PHARMA</b>		
TYPE OF SUBMISSION (check one) <input type="checkbox"/> ORIGINAL APPLICATION <input checked="" type="checkbox"/> AMENDMENT TO A PENDING APPLICATION <input type="checkbox"/> RESUBMISSION <input type="checkbox"/> PRESUBMISSION <input type="checkbox"/> ANNUAL REPORT <input type="checkbox"/> ESTABLISHMENT DESCRIPTION SUPPLEMENT <input type="checkbox"/> SUPAC SUPPLEMENT <input type="checkbox"/> EFFICACY SUPPLEMENT <input type="checkbox"/> LABELING SUPPLEMENT <input type="checkbox"/> CHEMISTRY MANUFACTURING AND CONTROLS SUPPLEMENT <input type="checkbox"/> OTHER		
REASON FOR SUBMISSION <b>Telephone Amendment</b>		
PROPOSED MARKETING STATUS (check one) <input checked="" type="checkbox"/> PRESCRIPTION PRODUCT (Rx) <input type="checkbox"/> OVER THE COUNTER PRODUCT (OTC)		
NUMBER OF VOLUMES SUBMITTED <b>1</b>	THIS APPLICATION IS <input checked="" type="checkbox"/> PAPER <input type="checkbox"/> PAPER AND ELECTRONIC <input type="checkbox"/> ELECTRONIC	
<b>ESTABLISHMENT INFORMATION</b>		
Provide locations of all manufacturing, packaging and control sites for drug substances and drug products (continuation sheets may be used if necessary). Include name, address, contact, telephone number, registration number (CFR), DMF number, and manufacturing steps and/or type of testing (e.g. Final dosage form, Stability testing) conducted at the site. Please indicate whether the site is ready for inspection or, if not, when it will be ready.		
Cross References (list related License Application, INDs, NDAs, PMAs, 510(k)s, IDEs, BMFs, and DMFs referenced in the current application)		

This application contains the following items: (Check all that apply)		
	1. Index	
	2. Labeling (check one) <input type="checkbox"/> Draft Labeling <input type="checkbox"/> Final Printed Labeling	
	3. Summary (21 CFR 314.50 (c))	
X	4. Chemistry section	
X	A. Chemistry, manufacturing, and controls information (e.g. 21 CFR 314.50 (d) (1), 21 CFR 601.2)	
	B. Samples (21 CFR 314.50 (e) (1), 21 CFR 601.2 (a)) (Submit only upon FDA's request)	
	C. Methods validation package (e.g. 21 CFR 314.50 (e) (2) (i), 21 CFR 601.2)	
	5. Nonclinical pharmacology and toxicology section (e.g. 21 CFR 314.50 (d) (2), 21 CFR 601.2)	
	6. Human pharmacokinetics and bioavailability section (e.g. 21 CFR 314.50 (d) (3), 21 CFR 601.2)	
	7. Clinical Microbiology (e.g. 21 CFR 314.50 (d) (4))	
	8. Clinical data section (e.g. 21 CFR 314.50 (d) (5))	
	9. Safety update report (e.g. 21 CFR 314.50 (d) (5) (vi) (b), 21 CFR 601.2)	
	10. Statistical section (e.g. 21 CFR 314.50 (d) (6), 21 CFR 601.2)	
	11. Case report tabulations (e.g. 21 CFR 314.50 (f) (1), 21 CFR 601.2)	
	12. Case reports forms (e.g. 21 CFR 314.50 (f) (2), 21 CFR 601.2)	
	13. Patent information on any patent which claims the drug (21 U.S.C. 355 (b) or (c))	
	14. A patent certification with respect to any patent which claims the drug (21 U.S.C. 355 (b) (2) or (j) (2) (A))	
	15. Establishment description (21 CFR Part 600, if applicable)	
	16. Debarment certification	
	17. Field copy certification	
	18. User Fee Cover Sheet (Form FDA 3397)	
	19. OTHER (Specify)	
<b>CERTIFICATION</b> I agree to update this application with new safety information about the product that may reasonably affect the statement of Contraindications, warnings, precautions, or adverse reactions in the draft labeling. I agree to submit safety update reports as provided for by regulation or as requested by FDA. If this application is approved, I agree to comply with all applicable laws and regulations that apply to approved applications, including, but not limited to the following: <ol style="list-style-type: none"> <li>1. Good manufacturing practice regulations in 21 CFR 210 and 211, 606, and/or 820.</li> <li>2. Biological establishment standards in 21 CFR Part 600.</li> <li>3. Labeling regulations in 21 CFR 201, 606, 610 and/or 809.</li> <li>4. In the case of a prescription drug or biological product, prescription drug advertising regulations in 21 CFR 202.</li> <li>5. Regulations on making changes in application in 21 CFR 314.70, 314.71, 314.72, 314.97, 314.99 and 601.12.</li> <li>6. Regulations on reports in 21 CFR 314.80, 314.81, 600.80 and 600.81.</li> <li>7. Local, state and Federal environmental impact laws.</li> </ol> If this application applies to a drug product that FDA has proposed for scheduling under the Controlled Substances Act I agree not to market the product until the Drug Enforcement Administration makes a final scheduling decision. The data and information in this submission have been reviewed and are certified to be true and accurate. Warning: a willfully false statement is a criminal offense, U. S. Code, title 18, section 1001.		
SIGNATURE OF RESPONSIBLE OFFICIAL OR AGENT		TYPED NAME AND TITLE Deborah A. Jaskot Senior Director, Regulatory Affairs
		DATE 11/23/98
ADDRESS (Street, City, State and ZIP Code)		Telephone Number
TEVA Pharmaceuticals USA 1510 Delp Drive, Kulpville, PA 19443		(215) 256-8400
Public reporting burden for this collection of information is estimated to average 40 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to:		
DHHS, Reports Clearance Officer Paperwork Reduction Project (0910-) Hubert H. Humphrey Building, Room 531-H 200 Independence Avenue, S.W. Washington, DC 20201 Please DO NOT RETURN this form to this address.		
An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a current valid OMB control number.		

**REVIEW OF PROFESSIONAL LABELING  
DIVISION OF LABELING AND PROGRAM SUPPORT  
LABELING REVIEW BRANCH**

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ANDA Number: 75-147

Date of Submission: June 13, 1997

Applicant's Name: Teva Pharmaceuticals USA

Established Name: Isosorbide Mononitrate Tablets 20 mg

Labeling Deficiencies:

1. CONTAINER 30s, 100s, 1000s

Satisfactory in draft. However, the Poison Prevention Packaging Act notes that special packaging (child-resistant closures) should be the responsibility of the manufacturers when the container is clearly intended to be utilized in dispensing (unit-of-use packaging). Your proposed container of 30 tablets appears to be in this category, therefore, we believe that this package must comply with the Act. Please comment.

2. INSERT

a. GENERAL COMMENT

There is no need to capitalize isosorbide mononitrate tablets unless required by sentence structure.

b. DESCRIPTION

Revise the second paragraph to read as follows:

Isosorbide mononitrate tablets, for oral administration, contain 20 mg of isosorbide mononitrate. In addition, each tablet contains the following inactive ingredients: ...

c. INDICATIONS AND USAGE

Revise the first sentence to read as follows:

Isosorbide mononitrate tablets are indicated ...

d. PRECAUTIONS (Table)

- i. Delete the vertical line segment between "of" and "MRHD\*".
- ii. Bold the horizontal line which starts between "Rabbit" and "Rat".
- iii. Revise the last column of numbers to read:  
363, 200, 120, 118, 80, 60.

e. ADVERSE REACTIONS

Relocate the adverse reaction "susurrus aurium" from under the "Miscellaneous" category to in between "palpitations" and "tachycardia" under the "Cardiovascular" category.

f. OVERDOSAGE

- i. Hemodynamic Effects, first paragraph, last sentence.

... upright posture); air hunger ...  
[close the parentheses].

- ii. Methemoglobinemia

- A). First paragraph, last sentence.

... to 7.8 to 11.1 mg of ...  
[replace hyphen with "to"]

- B). Last paragraph

... blue, 1 to 2 mg/kg ...  
[replace hyphen with "to"]

g. HOW SUPPLIED

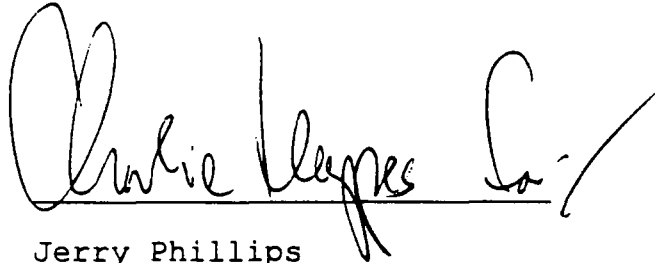
- i. We encourage the use of the NDC number in this section.

- ii. You describe your tablet as ... "scored and debossed "93" on one side and "76" on the other". The picture of the tablet found on page 2041 has the numbers "93" and "76" on the same side of the tablet and is described as ... "scored on one side and debossed on the other side with the numbers "93" and "76". Please comment and/or revise.

Please ~~revise~~ revise your insert labeling, as instructed above, and submit in final print labels and labeling.

Please note that we reserve the right to request further changes in your labels and/or labeling based upon changes in the approved labeling of the listed drug or upon further review of the application prior to approval.

To facilitate review of your next submission, and in accordance with 21 CFR 314.94(a)(8)(iv), please provide a side-by-side comparison of your proposed labeling with your last submission with all differences annotated and explained.

A handwritten signature in black ink, appearing to read "Jerry Phillips", with a large, stylized flourish extending from the end of the signature.

Jerry Phillips  
Director  
Division of Labeling and Program Support  
Office of Generic Drugs  
Center for Drug Evaluation and Research